

# BRINE-SALT IMPROVED:

O R,

The method of making Salt from Brine, that  
shall be as good or better than

## FRENCH BAY-SALT.

In a Letter

To the Right Honourable the Lords Commissioners of  
the Admiralty.

Dated 8 July, 1746.

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By Thomas Lowndes.

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——— *Veræ voces nunc demum pectore ab imo  
Eliciuntur, et eripitur Persona; manet Res.* LUCRETIVS.

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L O N D O N:  
Printed for S. Austen, in Newgate-street.  
M DCC XLVI.

## A D V E R T I S E M E N T.

**T**HIS Treatise not only contains the method of making Salt from Brine, in a Letter, &c. but likewise a Letter from the Lords of the Admiralty to the College of Physicians, and their Answer; as also several Accounts and Estimates, shewing what quantity of foreign Salt is annually consumed in Great Britain and Ireland, and in our American Fishery, with other proper Testimonies.

N. B. The Author does not at all doubt, but that the Brine of Worcester-shire is of equal goodness with that of Cheshire: but having made no Experiment of the Brine of Droitwich, on that Account he does not mention it in his Letter to the Lords of the Admiralty, of the 8th of July, 1746.





*Mr. Lowndes's Letter to Thomas Corbett  
Esquire, Secretary to the Right Honourable the  
Lords Commissioners of the Admiralty.*

S I R,



KNOW you have of course the Votes of the House of Commons, and therefore I beg leave to refer you to those of the 26th of last *May*, and those of the 3d instant. But I inclose a copy of my Proposal mentioned in the Votes of the 3d, because I believe an authentic copy is not yet come to your office.

I presume, that of all the methods, which can be suggested of laying open my secret, the Right Honourable the Lords Commissioners of the Admiralty will prefer that, whereby the present Salt-makers will be induced to fall the most readily and generally into it. For the greater the quantity is of Salt made my way, the more satisfied the Public will be, that my secret is truly made known. Not that I mean, that their Lordships should buy any

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more

more Salt, than what they think proper for the several trials.

I am now very ill of the colic and gravel; but I will as soon as I am able reduce into writing, and offer to their Lordships consideration my thoughts, how the intent of the House of Commons may be best carried into execution. For I take the liberty to assure their Lordships, that I mean nothing but dispatch joined with such fairness, as will put my conduct and undertaking beyond the possibility of a trick, or the imputation of a job.

I had asked a much greater reward, but I was resolved that malice should not have the least handle to attack any Gentlemen, whose generosity should induce them to assist me, either in the House of Commons or elsewhere. I am with great and real respect,

S I R,

*Your most obedient humble servant,*

30 June, 1746.

Tho. Lowndes.

Two or three days after sending the above Letter, Mr. L—s not expecting any Answer to it in writing, went to the Admiralty-Office, and took the liberty to let Mr. Corbett know, that he desired the favour to speak with him; who immediately, in a very obliging manner, came into the waiting-room. Then Mr. L—s requested to know,  
 “ If the Lords of the Admiralty would please to direct  
 “ him,



“ him, as to the way he should take of imparting his method of making Brine-Salt. For in every circumstance relating to this affair, it was his duty, and he was ready to obey their Lordships pleasure.” To which Mr. *Corbett* said: “ Their Lordships left him entirely to the way he thought best.” Whereupon Mr. *L—s* replied, “ That since the gratification was to come from the Public, he thought the most plain and intelligible manner of expressing what he had to offer, would (in all likelihood) give the greatest content.” To which Mr. *Corbett* said: “ Do so then.” Upon which Mr. *L—s* thank’d him for his civility, and retired.

*A Letter from Mr. L—s to Thomas Corbett Esquire,  
Secretary to the Admiralty, 4th July, 1746.*

S I R,

I Desire, that you will be so obliging, as to acquaint the Right Honourable the Lords Commissioners of the Admiralty, that my method of making Salt from Brine, as good or better than the *French* Bay-Salt, is ready to be communicated to their Lordships in form, whenever their Lordships shall please to direct.

My extream ill health has prevented me making this application sooner.

*Mr.*

*Mr. Corbett's Answer to the above Letter. Admiralty.  
Office, 5th July, 1746.*

*S I R,*

**I**N return to your Letter of yesterday's date, which I have laid before my Lords Commissioners of the Admiralty, I am commanded to acquaint you, that you may deliver in your method of making Salt from Brine, as good or better than the *French Bay-Salt*, when you think fit.

*I am, &c.*

*A Letter from Mr. L—s to Thomas Corbett Esquire,  
Secretary to the Admiralty, 8th July, 1746.*

*S I R,*

**I**N pursuance of your Letter of the 5th instant, I hereby with transmit my method of making Brine-Salt, &c. which you will please on my behalf to present to the Right Honourable the Lords Commissioners of the Admiralty.

The facts in that Paper are all true. And the incorrectness I hope will be excused by the very severe malady I have lately been afflicted with, and of which I am not yet recovered.

As my encouragement for this undertaking comes from the House of Commons, I think it my duty to send a  
copy



copy of my method to the Speaker, either to-morrow or the day following.

*I am, &c.*

The Reader is desired to observe, that the true and principal reason for printing these Letters, by way of Introduction, is: That Mr. *Lowndes's* reward is conditional; and as no part of it is immediately due, and some part not payable till above two years hence; and he being in a very weak and declining state of health, is advised to go to *Portugal* for the benefit of the air: In order therefore to prevent, or at least satisfy any future enquiry, he thinks it now proper to shew, that every thing has (to the utmost of his power) been transacted with the most punctual regularity. And Mr. *L—s* also is very glad of this opportunity, to make his most sincere and grateful acknowledgments to Mr. Secretary *Corbett*, for always treating him with generous courtesy, and never creating the least delay; tho' almost five years have been spent in this anxious solicitation.

*Mr.*



*Mr. Lowndes's Letter to the Right Honourable  
the Lords Commissioners of the Admiralty,  
8th of July, 1746.*

My LORDS,



Take the liberty most humbly to represent to your Lordships, that in my infancy, living at *Middlewich* in *Cheshire*, I was, very early in life, thoroughly acquainted with the common way of making Salt there. Several years after, travelling in *France*, I went on purpose to *Rochelle*, and the parts adjacent, to observe the whole Process of their making Salt by means of no other heat but that of the Sun. That district of *France* I chose rather than any other; because the greatest quantity of Bay-Salt is made in that neighbourhood, and which, by all Merchants, Victuallers, and Fishermen, is universally looked upon to be the best Salt in *Europe*.

After my return to *England*, as soon as some business I was then engaged in, would permit, I went to *Holland*. This journey was occasioned by my curiosity, to know from



from whence it proceeds, that the *Dutch* White Herrings do always look a great deal fairer, and are much cleaner, and will keep many months longer than ours, even when we use the best foreign Salt. And I found (as I had often heard) *that the Dutch Salt being purified, is the chief cause of the excellency of their fish.*

From the remarks, that occurred to me in *France* and *Holland*, with the addition of allowing properly for the difference in the materials, I deduced the method of making Salt from Brine, as good or better than *French* Bay-Salt. And in pursuance of an Address from the Honourable House of Commons, His Majesty having been most graciously pleased to direct your Lordships to enter into an agreement with me, for discovering the said method; it is here, with the greatest deference, most humbly presented to your Lordships.

### This is the Process.

**L**ET a *Cheshire Salt-pan* (which commonly contains about eight hundred gallons) *be filled with Brine, to within about an inch of the top; then make and light the fire; and when the Brine is just lukewarm, put in about an ounce of blood from the butcher's, or the whites of two eggs: let the pan boil with all possible violence; as the scum rises take it off; when the fresh or watery part is pretty well decreased, throw into the pan the third part of a pint of new ale, or that quantity of bot-*

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toms

*toms of malt-drink : upon the Brine's beginning to grain, throw into it the quantity of a small nutmeg of fresh butter ; and when the liquor has salted for about half an hour, that is, has produced a good deal of Salt, draw the pan, in other words, take out the Salt. By this time the fire will be greatly abated, and so will the heat of the liquor. Let no more fuel be thrown on the fire ; but let the Brine gently cool, till one can just bear to put one's hand into it ; keep the Brine of that heat as near as possible ; and when it has worked for some time, and is beginning to grain, throw in the quantity of a small nutmeg of fresh butter ; and about two minutes after that, scatter throughout the pan, as equally as may be, an ounce and three quarters of clean common Allom pulverized very fine ; and then instantly, with the common iron-scraper-pan stir the Brine very briskly in every part of the pan, for about a minute ; then let the pan settle, and constantly feed the fire, so that the Brine may never be quite scalding hot, nor near so cold as lukewarm : let the pan stand working thus, for about three days and nights, and then draw it.*

*The Brine remaining will by this time be so cold, that it will not work at all ; therefore fresh Coals must be thrown upon the fire, and the Brine must boil for about half an hour, but not near so violently as before the first drawing ; then, with the usual instrument, take out such Salt as is beginning to fall, (as they term it) and put it apart ; now let the pan settle and cool. When the*

*Brine*



*Brine becomes no hotter, than one can just bear to put one's hand into it, proceed in all respects as before; only let the quantity of Allom not exceed an ounce and a quarter. And in about eight and forty hours after draw the pan.*

The Process being ended, permit me to acquaint your Lordships, that, in repairing the fires, I chiefly use cinders; because, to preserve a constant, equal, and gentle heat, cinders are better than coals: though at present cinders in *Cheshire* are so little valued, as to be generally thrown into the highways.

There are in *Cheshire* two or three pits, whose Brine (though no way faulty) does not work kindly with butter. The bare naming of this is enough; since the meanest workman well knows (what is vulgarly called) the humour of the pit he works at: and to shew the physical reason for that singularity, would be both tedious and useless. And it is my humble opinion, that this sort of Brine will require a less quantity of *Allom* to restore its grain, than is before mentioned. And 'tis also highly probable, that the operations of drawing the pan the second and third time, may be performed several hours sooner than the time prescribed for common Brine. I design to make trial of this extraordinary Brine, when I go next into *Cheshire*.

I hope your Lordships will not be displeased with my mentioning, that I most industriously contrived to make

my Proceſs to coincide with that now uſed in *Cheſhire*; and therefore, in the firſt part of the work, there is not any difference betwixt the two methods. But mine entirely takes place, as ſoon as the firſt drawing of the pan is finiſhed.

And here I muſt be allowed to obſerve, that by the violent boiling, without ſuffering the pan to ſettle, and to cool gently, the grain of the Salt is greatly altered, both in form and texture; and the Brine not being, in any degree, ſufficiently evaporated, the Salt diſſolves with the leaſt humidity. Then the air being admitted, and putrefaction immediately enſuing, 'tis impoſſible that, for long voyages, proviſions can be cured with Salt made after the uſual manner. And it is mere neceſſity that makes it to be uſed at land for meat, which is to be kept any time. But yet, this kind of Salt is more proper for the tender curd of new cheeſe, and for butter deſigned for preſent ſpending, than thorough-made Salt; becauſe it ſaves a good deal of trouble, by its not wanting either to be reduced to powder, or to be moiſtened.

I crave leave to remark, that by long boiling with great fires, Salt not only loſes its ſpirit, ſtrength, and ſhoot, but its grain becomes ſo very looſe, and ſoft, that it is rather a Lixivium than Salt.

But yet if Brine be not boiled violently for a due time, at the beginning of the operation, the Proceſs of making Salt will be exceeding tedious: becauſe the *freſh*, by all means, muſt be conſumed. And alſo, though Brine, when  
it



it is pumped into the pan, seems to be as clear and pure as rock-water ; yet there is always in it no small quantity of earthy particles, which cannot be discharged, but by putting the Brine into the greatest agitation.

Brine-Salt made by any former Process, all possible care being taken, has evermore two main defects, *flakeyness* and *softness*. These faults are occasioned by the Brine's being boiled (at least for some time) with the most intense heat, in a place where the air is not only in a great degree inclosed, but the room is, at the same time, filled with thick clouds of steam and smoak, which are let out only by a small louvre : whereas the sun, in making Marine-Salt, is vastly assisted by the acid of the air, as the learned call it. In order therefore, in some measure to equal that advantage from the open air, as likewise to remedy the imperfections of Brine-Salt ; amongst many trials of acid preparations and minerals, I had recourse to *Allom*, which alone fully answered every thing that I proposed. For it restored the Salt to its *natural cubical shoot*, and gave it a *proper hardness* : nor had it any bad effect whatever.

Here are then two Salts, which the Public will have in its power to use.

*The one called French Bay-Salt*, made by the sun from sea-water. This Salt, for which the consumer here pays a great rate, is always mixed with dirt and nastiness, which make up *a full seventh part*. The filth arises from putrefied human bodies, dead fish, and the carcases of animals,

imals, and from most immense quantities of different kinds of rotten weeds, together with innumerable other unwholesome mixtures, brought into the salines by the tide.

*The other Salt*, made according to the foregoing Process, perfectly clean, sweet, and strong, and from ingredients in every respect innocent, and to be afforded at a much less price.

Which of these *two Salts* is most eligible, one would think could be no question.

Yet many of the *French* Chymists extol the Bay-Salt even for its impurity. And if their most extravagant abstract zeal to promote, in defiance of matter of fact, the sale of their Monarch's Salt, does not render these Gentlemen incapable of conviction; I would refer them to the ancient and present practice of the *Hollanders*.

The *Dutch*, in purifying their Salt, always blend with the *French* Bay-Salt a great quantity of *Spanish* and other *Mediterranean* Salts\*; so (what is called) the vitriol of these Salts keeps the *French* Salt from being softened. For these Salts are put into great pans, properly filled with brackish water, and boiled with coal-fires. And the mildness of the *French* Salt tempers the other Salts.

And can it be imagined, that the parsimonious *Dutch* would, for ages, have been at this charge and pains to their own prejudice? If filth added any virtue to Salt, *French* fish cured with dirty Salt, would then surely in foreign

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\* This Process is frequently called making Salt upon Salt.



markets out-sell *Dutch* fish preserved with clean Salt; whereas all *Europe* knows the contrary, to the *Hollanders* very great profit.

But after all the expence, and trouble that they take in *Holland* to purge their Salt, and remedy its defects, it is far inferior in purity, and every other good property, to our Brine-Salt, if rightly made.

And when our Legislature pleases to lay *a moderate additional duty upon coals exported*, we shall, by that means, be able to sell Brine-Salt, made to the greatest perfection, much cheaper than foreigners can purify theirs: and unless foreigners do either purify their Salt, or purchase ours, the greatest part of the foreign fish-trade will unavoidably fall into our hands.

Of all the kinds of Salt furnished by *Cheshire*, the *Shivery-Salt* is the best. This is made on a *Saturday* night, and, in regard to the day following, it is not drawn till *Monday*; and in the mean while, to prevent accidents, there is less fire used. This Salt the potters buy up, because being stronger, it glazes earthen ware better than the common Salt. But even this *Shivery-Salt* will neither keep meat for long voyages, nor will it cure fish but very indifferently. For it has by no means a proper *Grain* for that purpose; nor is the Salt so thoroughly cleared of the *Fresh* as it ought to be.

As for the *Rock-Salt* of *Cheshire*, it has so many bad qualities, that most certainly nature never could intend that either fish or flesh should be cured with it; and whether

ther it be wholesome to be eaten, let the learned Physician pronounce.

Your Lordships curiosity and candour (I presume) will not be displeased to know, that in all the Salt-works of *Cheshire*, there are tubs set under the barrows (or wicker-baskets) to catch the droppings of the Salt, when fresh drawn: now if one of these tubs stands there eight or ten days, and has received four or five quarts of liquor, there will be always found in it a small quantity of Salt, perhaps about *an ounce*: and should the inside of the tub happen to be dirty, no one can perceive any difference between this Tub-Salt and the best *French Bay-Salt*, only the latter is not so sweet.

This proves the common notion, of Brine-Salt being naturally of a *flakey shoot*, to be erroneous.

And in the Salt made by the sun, as well as by my way, you will never fail of seeing very many little *pyramids*, which are composed of a parcel of small cubical grains, piled up in a most exact order, and cemented together with wonderful nicety; and the crowns of these *pyramids* are always cubes of a much larger size than any of the rest.

All the little merit therefore that I can pretend to, in the Improvement of Brine-Salt, is, that I have, with the utmost efforts, endeavoured to follow nature; and that I made it my study to accommodate my Process, as near as possible, to the present practice in *Cheshire*, that the workmen might not pretend any difficulties in executing the directions.



And though when I have made the quantity of Salt your Lordships shall please to order, I can then speak with more exactness, as to the Price, at which Salt made my way can be afforded; yet I now beg leave upon that head to observe, that, by my method, one man may easily look after four pans, and his wife and his children (when they come to twelve or fourteen years of age) may get their bread by working along with him. In the present way, it is as much as one man can do to take care of one pan. So that (cinders being much used in my Process) with regard to coals and labour, my Salt will cost less than the common Salt. A pan, in my way of working, will last more than three times as long, as in that now used. My Salt needs no hot-houses, which are absolutely necessary for the common Salt. Thus the expence of those buildings is saved. It will not waste in carriage, as the present Salt does: by this means the three Bushels in forty, allowed by the Government for waste, will go towards making the freight easy. And if the Salt-proprietors follow my Process, they will have a vastly greater demand both here and from abroad, than they ever yet had; together with many other advantages. And since to this method of mine the Salt-proprietors cannot object any thing, except only the expence of new pans, and sheds to cover them; I don't in the least doubt, but the certainty of a prosperous trade will soon make my proposal, upon every account, acceptable to them.

I beg leave to mention, that, for the first salting of meat, my Salt must be ground or pounded pretty fine;  
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for the second salting it must be bruised; and if meat is to bear a long voyage, or to keep a great while, then for the third salting, it must be laid on whole.

The generality of persons being ignorant of the true properties of Salt, obliges me to hint, that Salt and Sugar (if good) have the like effects upon flesh and fruit, when they are neither tainted nor decayed: for the air must be excluded, the outside not hardened, and the juice preserved. And if flesh well-fed, and skilfully slaughtered, when it is salted, be not soft, moist, and mellow, as well as perfectly sweet, beyond all dispute the Salt is faulty.

And since it will be (I hope) of no small advantage to the Public, permit me, my Lords, to observe, that if the Inhabitants of *Great Britain* and *Ireland*, when they make Salt from sea-water, would for the far greater part of the Process use much slower fires, and would suffer the liquor to lye a good while in the pan, scarce simmering instead of boiling; they would see almost as great a difference betwixt their Salt then, and what it is now, as there is betwixt the plumpest grain and chaff. I am with the greatest and most real respect,

My Lords, &c.

*P. S.* The quantities of Allom mentioned in the Process are the greatest I ever used. My most usual quantities were an ounce and half in the second drawing of the pan, and an ounce and half a drachm in the third, and sometimes half a drachm less.

*Mr.*





*Mr. Lowndes's Letter to Doctor Plumptre, President of the College of Physicians, dated 24th September, 1746.*

S I R,



Take the liberty to acquaint you, that a gallon of the best Brine in *Cheshire* yields three pounds weight of Salt, and a gallon of the ordinary Brine of that county yields two pounds weight; of consequence, then a pan of eight hundred gallons (the usual size) of the best Brine, produces twenty four hundred pounds weight of Salt, and of ordinary Brine sixteen hundred pounds weight: deduct the third part of each quantity for the first drawing of the pan, the remainders to be grained and hardened by Allom are, of the best Brine sixteen hundred pounds of Salt, of the ordinary Brine one thousand and sixty six pounds, and two thirds of a pound.

I humbly desire your opinion, whether three ounces of common Allom, being incorporated with the least of

the abovementioned remainders, can have any ill effect with regard to health; that is, one grain and about one third of a grain of Allom to one pound of Salt.

I design to publish my Proceſs of making Salt, together with this and many other Papers upon that topic; all which in a few weeks afterwards (upon account of the importance of the ſubject) I know will be printed abroad in *Dutch* and *French*: and I would have foreigners ſee, that no ingredient (however innocent) is put into the Salt, without conſulting the Preſident of the College of Phyſicians. Therefore be pleaſed to return an Answer. I am ſenſible the College cannot be convened (eſpecially at this time of the year) without a good deal of trouble.

Great allowances are to be made for perſons groſsly ignorant; and I would by no means propoſe to a Gentleman of your learning, ſuch an obvious queſtion, if I was not fully perſuaded, that the ſolution of it in form would be of public utility. And I hope to effect *a much greater thing*, than I have the aſſurance to mention.

*I am, &c.*

P. S.



P. S. The reduction stands thus :

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 \end{array}$$

*The following Testimonial is to be regarded as an Answer to the above Letter.*

**W** Hereas Mr. *Lowndes* has desired my opinion concerning the wholesomeness of Allom, as it relates to his method of making Salt from Brine, I do accordingly give it very willingly : and I think with great certainty, that the Proportion used in his Process, according to his account, cannot possibly be of any detriment to the health of mankind.

I am so fully persuaded of it, that I freely and willingly sign it as my opinion.

25 Sept. 1746.

*H. Plumptre.*

*A Let-*



*A Letter from Thomas Corbett Esquire, Secretary to the Lords of the Admiralty, to Doctor Plumptre, President of the College of Physicians.*

*Admiralty-Office, 27 July, 1745.*

*S I R,*



R. Thomas Lowndes having represented to the Lords Commissioners of the Admiralty, in the inclosed Letter, that he has invented a new method of making Salt, which Salt is far better, both for curing flesh, and also for medicinal uses, than any yet found out; and proposing that the same may be made use of for curing the flesh for victualling the Navy; and their Lordships being desirous of encouraging any reasonable Scheme, that may tend to the preservation of the health of the seamen on board His Majesty's ships: I am ordered by their Lordships, to desire you will be at the trouble of communicating this Letter to the Gentlemen of the College of Physicians,



cians, and that they will permit him to attend them with Specimens of his Salt ; and when they have heard him, they will please to report to their Lordships their opinion of the usefulness of the said Salt in the Navy.

*I am, &c.*



*The*



*The Report of the College of Physicians, 27th  
August, 1745.*

**T**HE President acquainted the College, that the occasion of their Meeting was a Letter sent by order of the Lords of the Admiralty, relating to an application made to their Lordships by Mr. *Lowndes*, recommending his Salt for the use of the Navy: which was read, and Mr. *Lowndes* called in, and produced Specimens of his Salt; and was asked several questions concerning it.

*After due Consideration, they came to the following  
Resolution, viz.*

**I**T is the Opinion of the College from several Examinations, by the usual proofs of the goodness of Salt, that Mr. *Lowndes's* Salt is, in all respects, a strong and pure Salt, equal at least, if not preferable to any we are acquainted with. That it seems very likely to answer the curing flesh for the Navy in long voyages: which, being the material experiment wanting, they think ought to be recommended to their Lordships for trial. Signed

*Thomas Reeve, Register.*





*Mr. Lowndes's Proposal to the Right Honourable the Lords Commissioners of the Admiralty, in a Letter to Thomas Corbett Esquire, their Lordships Secretary.*

*Hampstead, 7th March, 1745-6.*

*S I R,*



Most humbly apprehend, that the Right Honourable the Lords Commissioners of the Admiralty will be of opinion, that the most satisfactory proofs of the goodness of my Salt, will naturally fall under these four heads; Domestic Uses, Beef for the Royal Navy, Pork for the same, and the Fishery of *America*.

That six months be allowed for the first, two years for the second and third, and twelve months for the fourth. When it is considered how many years I have been in effecting this service, of such importance to the Public; what charges I have been at in experiments, and going  
D abroad;

abroad; and the risque I ran in making necessary observations; no reasonable man can think, but my demand is very moderate, of being paid to me, or my representatives, free of all fees and deductions, one thousand pounds for each of the three first heads: and as the fishery consumes more Salt than all the other articles together, I therefore do expect for that head four thousand pounds; *on this condition, that my Salt equals or excels French Bay-Salt*, which is generally esteemed to be the best in *Europe*. And upon their Lordships agreeing to these terms, I (on my part) do humbly offer to disclose my Secret in such manner, as their Lordships shall please to direct. And if, upon trial, my Salt be found, in every one of the above particulars, to be inferior to the *French Bay-Salt*, though what I have done cannot be denied to be an improvement of no small public utility, *yet I make my country a present of it.*

When my method is exposed, and the reasons of the Process are seriously attended to; all the Salt made from sea-water in these three kingdoms may be improved, so as to be (I conceive) about one third part better than it is now. But to make our Marine-Salt equal in goodness, purity, price, and sweetness, with Brine-Salt, is wholly impossible: because all sea-water is impregnated with the Bittern, which probably is the offspring of Vitriol, and which defies the power of Chymistry to divest it. But Brine is naturally quite free from that, and every other bad property. Nor do I make any demand for the improvement



provement of our Sea-Salt, though it be the direct consequence of my intended performance. Not that I am ignorant what immense quantities of our common Marine-Salt the Navy uses, as well as the Cities of *London* and *Westminster*, Borough of *Southwark*, and all those counties where the *Thames* is navigable, besides very many other places. And if I fail to shew (if my advice be followed) how to meliorate the Marine-Salt of *Great Britain* and *Ireland*, let my country brand me with infamy.

I need not hint to their Lordships, the vast losses the Navy constantly sustains for want of good Salt: and their Lordships must know that to be the cause of the too frequent unwholesomeness of provisions, whereby the poor seamens lives are endangered.

One of the main obstructions to our Herring Fishery, is the badness of our Salt: And it is the sole hindrance to that great exportation of butter, which *England* and *Ireland* might otherwise reasonably expect to have; these kingdoms producing in vast abundance the best butter in *Europe*. And it cannot be doubted (if this attempt of mine meets with encouragement, and proves successful) but we shall, by means thereof, purchase our *Naval Stores* at much easier rates, than we or our ancestors ever did, or than we otherwise can do. For we shall send Salt to the east country, which now buys all its Salt from foreign countries, and especially from *France*; who cannot be more sensibly affected, than by our interfering with her in that branch of commerce. So that *Great Britain's*

saving a considerable sum of money, which is yearly paid to foreigners, will be one of the least advantages produced by my proposal. It will too (amongst other things) occasion a good market for our ordinary offal and flet-milk cheeses, which are now in a manner thrown away. And when the profit of our *Newfoundland* trade, and our most *beneficial and glorious acquisition of Cape Breton*, are the objects of our consideration; I believe there is not a subject of these three kingdoms, who will think that those places ought to depend upon *France, Spain, Portugal, Sicily, and Sardinia* for *Salt*, if it can be prevented.

If their Lordships please to write to any of their officers in *Holland*, they will inform them, that the *Dutch* purify by coal-fires, all the *Salt* used in the curing their white herrings, which will last quite good a whole year; and all white herrings cured with unpurified *Salt*, will not last above four months. This will disprove an untruth propagated with great industry, *that no Salt will preserve well, but what is made by the sun*. The fault lies wholly in the unskilfulness of the Persons, who use coal-fires. And I presume, it will be a very acceptable intimation to their Lordships, upon good grounds to be assured, that my *Salt* can be compleatly made, and crystalized at a good deal less expence, than the *Dutch* can purify theirs.

Mr. *Ellison*, of *Middlewich* in *Cheshire*, at whose works I made the *Salt* (of which samples were presented both to their Lordships, and to the College of Physicians)

can



can certify to their Lordships, that the pans I used, did not contain less than seven hundred gallons each.

This will expose some Calumniators, who have affirmed, *That I made but a very few pounds weight at one time.* And I hope their Lordships will here indulge me the liberty to observe to them, that, if my Salt should answer upon the several trials above proposed, and if thereupon a great demand for it should ensue; pans to contain sixteen hundred gallons each will be the properest for the purpose: because Brine works more kindly, and Salt grains much better in very large pans, than in small ones.

If I may be allowed to value any thing that I can perform, I should be inclined not to think amiss of my method of making Salt, upon account of the great easiness of the Process, and its being (when all things are duly estimated) far less chargeable than the method now used. All the charge is at the setting out. And the present utensils will do pretty well, 'till the Salt Proprietors are fully convinced by experience, that what I propose is for their interest.

I don't apply to the Crown for a patent for this improvement; because I conceive that the act empowering the Crown to grant patents, does not mean to include inventions or improvements relating to the *necessaries of life.*

*No malice* has been wanting to bring a disreputation upon my Salt: and every *wicked art* will be practised to  
render

render its virtue ineffectual. The Salt Contractors are my avowed enemies; for the miscarrying of my attempt will be their gain. It is well known, that the best Salt in the universe may be vitiated, and a very large quantity of Provisions may be spoiled by a certain liquor, which costs but a few pence. And the officers in the victualling, and the purfers of ships, and their clerks, cannot be supposed to be ignorant of it.

And as the success of this affair is of very great consequence, both to the Public and myself, their Lordships will permit me to mention (with all submission to their judgment) whether a good quantity, as four or five hundred bushels of my Salt, should not be distributed to some of the most considerable traders to *Newfoundland*; whether eighty, or one hundred bushels, should not be given to some eminent merchants, to be used in salting beef and pork to be sent to climates, where provisions are with the greatest difficulty preserved. And for the Royal Navy, that a good large quantity of beef and pork be cured with my Salt, and put on board ships commanded by officers of known discretion and character. No risque can possibly attend this trial for the Navy; it being by the best judges allowed, that my Salt far excels that of *Newcastle* or *Limington*. That certificates of the proof in the above articles be transmitted to the Lords of the Admiralty. And for the goodness of my Salt in domestic uses, there cannot be better judges, than their Lordships in their own house-keeping.

I there.



I therefore humbly propose to go down into *Cheshire* at my own expence, and to make, or cause to be made what quantity of Salt their Lordships shall please to order, and to have it laid down, or put on board at *Liverpool* at eight pence halfpenny the Bushel, pursuant to such Directions as their Lordships shall give.

The great variety of matter necessary to be touched upon must be my apology for the length of this Letter; and whatever in any part of it is thought by their Lordships to be wrong, shall be rectified to their satisfaction. For I don't doubt, but their Lordships will act by me with justice and honour; and indeed I cordially intend the service of the Public.

*P. S.* Sir *Thomas Lombe* had fourteen thousand pounds given him for his Machine, after he had gained by it a very large fortune. And I hope I am not immodest, in supposing my Undertaking not to be less useful.

*A Letter from Mr. L—s, 12th March, 1745-6, to Thomas Corbett Esquire, Secretary to the Lords of the Admiralty.*

S I R,

AS my Letter to you of the 7th instant treated upon several branches of Commerce, as well as victualling the Royal Navy; I thought it proper to send a copy of it to the Lords of Trade, whom I have desired to confer  
upon

upon that Subject with the Right Honourable the Commissioners of the Admiralty, when they meet in the House of Commons.

It would certainly have been wrong in me not to give you this intimation.

*I am, &c.*

*A Letter to Mr. L—s, from Thomas Corbett Esquire,  
Secretary to the Admiralty.*

*Admiralty-Office, 28th March, 1746.*

*S I R,*

**H**AVING laid before my Lords Commissioners of the Admiralty your Letters of the 7th and 12th instant, representing, that you have found out a method of improving Salt, which is much better and cheaper than any foreign Salt, and very proper to be used in the Royal Navy; and proposing that a good large quantity of beef and pork be cured with your Salt for the Navy, and put on board ships commanded by officers of known discretion and character; I am ordered to acquaint you, that your Letters are sent to the Commissioners for victualling, with a recommendation from their Lordships to make an experiment thereof: and therefore you will attend that board for that purpose, and deliver your Proposal to them. But as to the rewards you mention, those things are not in the power of this board, but of the Parliament.

*I am, &c.*


*A Letter*





*A Letter from Mr. Lowndes to Mr. Ralph  
Bridge, dated 30th May, 1746.*

S I R,

 OUR long and thorough knowledge of *Cheshire*, your having the superintendence of a Salt-work belonging to the Honourable Mr. *Venables Vernon*, and your being Proprietor of one in your own right, make me to desire your information, whether you do really believe, that there is in *Cheshire* Brine sufficient to make a large quantity of Salt, as twenty five or thirty thousand tons of Salt yearly. You will please to return such an answer, as you will not be under any concern to see printed.

*I am, &c.*

E

*Mr.*

*Mr. Bridge's Answer to the above Letter, 31st May,  
1746.*

*S I R,*

**I** Have your favour of the 30th instant, and have been long acquainted with our Salt-springs in *Cheshire*; and do believe, there are now springs there sufficient to make twenty or thirty thousand tons a year; and, if there were a demand, more might be found.

*I am, &c.*





An Account of the quantity of Salt imported into *England* in seven years, ending at *Christmas*, 1743, distinguishing the countries from whence imported.

	From <i>Christmas</i> , 1736, to <i>Christ.</i> 1737,		1738,		1739,		1740,		1741,		1742,		1743.	
	<i>Wey</i> s	<i>bus.</i>	<i>Wey</i> s	<i>bus.</i>	<i>Wey</i> s	<i>bus.</i>	<i>Wey</i> s	<i>bus.</i>	<i>Wey</i> s	<i>bus.</i>	<i>Wey</i> s	<i>bus.</i>	<i>Wey</i> s	<i>bus.</i>
<i>Africa</i>									34	36				
<i>Flanders</i>											70	38	62	24
<i>France</i>	1869	26	171	10	197	19	955	13	5135	8	2596	34	3001	26
<i>Italy</i>	45	—	231	36	85	29			55	13	75	35		
<i>Ireland</i>									22	12				
<i>Portugal</i>	1525	8	2575	10	1593	7	1004	22	1132	30	1302	29	1223	13
<i>Spain</i>	1949	17	2040	8	908	20								
<i>Newfoundland</i>					6	—								
<i>Ile Guernsey</i>			17	16	5	6	327	2	125	19	255	8	190	31
Totals	5389	11	5036	—	2796	1	2286	37	6505	38	4301	24	4478	14

N. B. A Wey contains forty bushels.

N. B. The Inspector General receives no accounts from *Scotland*, so that this account of imports is for *England* only.

Custom-house, London,  
29th August, 1744.

John Oxenford, Ass. I. General.

Thomas Hill Esquire, Secretary to the Right Honourable the Lords Commissioners for Trade and Plantations, was so obliging as to procure this Paper for Mr. Lowndes.

An Estimate of what foreign Salt has been consumed in  
*England and Wales* for seven years, ending at *Lady-*  
*day*, 1743.

	busshels.
Year end. <i>Lady-day</i> , 1737, ———	100,792, at 84 pounds.
————— 1738, ———	99,624,
————— 1739, ———	127,485,
————— 1740, ———	100,694,
————— 1741, ———	109,335,
————— 1742, ———	127,392,
————— 1743, ———	76,661,
	<hr/>
	741,983.

*Salt-office, York-build-*  
*ings, 13th June, 1744.*

*John Elliot,*  
*Ex. Philip Elias Peltier, Secretary.*

Mr. *Lowndes* returns his humble thanks to the Honourable the Commissioners of the Salt-duty, for directing their officers to make out and attest this Account.

*N. B.* The Victualling-board can vouch, that, in time of peace, *French* Salt, when bought in large quantities, always costs above ten shillings *per* bushel; and now that it comes by the way of *Holland*, we pay a much higher price.



An Account of all the foreign Salt consumed in *Scotland* for seven years, preceding *Michaelmas*, 1742, distinguishing each year.

busshels

From <i>Michaelmas</i> , 1735, to <i>Michaelmas</i> , 1736,	340
Thence _____ to ditto _____ 1737,	500
Thence _____ to ditto _____ 1738,	900
Thence _____ to ditto _____ 1739,	100
Thence _____ to ditto _____ 1740,	470
Thence _____ to ditto _____ 1741,	<i>nil</i>
Thence _____ to ditto _____ 1742,	658

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2,968

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*Note*, That all the foreign Salt consumed at home, is used in curing of fish or flesh for exportation ; so that properly there is no home consumption.

Though this Account is not attested under the proper officer's hand, yet it can be proved to be authentic.

An

An Account of foreign Salt imported into *Ireland* for seven years, and from whence, each year distinguished.

	<i>Holland and Flanders,</i>	<i>France,</i>	<i>Spain and Portugal,</i>	<i>Plantations.</i>
	<i>Bushels,</i>	<i>Bushels,</i>	<i>Bushels,</i>	<i>Bushels.</i>
Years ending 25 March, { 1738	52	69,513	220,741	2,488
{ 1739		21,864	159,081	
{ 1740		18,542	107,564	
{ 1741		21,062	80,030	
{ 1742		81,022	81,434	
{ 1743		108,632	130,924	
{ 1744		36,028	96,950	

This Account may be depended upon to be true in every respect, though it is not certified by a public officer.





A Letter to Mr. Lowndes, from Mr. Kilby,  
Agent for New England, dated 11th May,  
1744.

S I R,



Find from *Lady-day*, 1739, to *Michaelmas*  
1742, were imported into *Massachusetts*.  
*New Hampshire*, and *Nova Scotia*, 74,28  
hogsheads of Salt, being 594,296 bushels,  
which is yearly 29,714 hogsheads, or 237,7  
bushels.

It may be noted, that during this time, the fish  
was greatly diminished by the *Spanish* war, and the co  
stant apprehensions of a *French* war's breaking out: a  
that the consumption of Salt in that country, in times  
peace, may be computed at least one third part more,  
may probably be nearest 40,000 hogsheads of Salt annual

*I am, &c.*

C. Kilby.

The 40,000 hogsheads is 320,000 bushels, or 10,000  
tons, being eight bushels to the hogshead, and four ho  
heads to the ton.

A Le



*A Letter to Mr. Lowndes, from Captain Masters,  
dated 5th June, 1745.*

*S I R,*



Y nearest computation we can make of the annual consumption of Salt, for the fishery of *Newfoundland*, is at least ten thousand tons; and according to the sample we have seen of your Salt, we really think it exceeding good for curing any sort of fish; therefore we wish you success in the affair, and remain, &c.

*Masters and Ballard.*

*F I N I S.*

The six last Vouchers and Letters are originals, and therefore Mr. L—s did not think himself at liberty to make any alteration.



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